ABSTRACT

The invention is concerned with apparatus and methods for measuring package permeability and/or permeant sorption. The apparatus includes a housing defining an inner sealed chamber that is substantially impervious to a permeant of interest. The chamber has an inlet for introducing an inert medium substantially free of the permeant and an outlet for removing the inert medium. A sensor is positioned within the chamber and to provide signals indicative of permeant concentrations. A sealable opening is provided in the housing for introducing, within the chamber, packages to be measured for permeability and/or permeant sorption. In the method, testing of permeant concentrations is cycled to determine the slope of a time line between a low and a high concentration of the permeant. Humidity and temperature are preferably maintained constant within the chamber during testing.